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Serial No. 10/567,369
Docket No. PKHF-04053US
HIR.201

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AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A semiconductor layer, comprising:
a ~~first layer comprising~~ a Ga_2O_3 system single crystal substrate; and
a ~~second~~ layer comprising a nitride surface of said ~~first layer~~ substrate containing oxygen and nitrogen.
- 2-3. (Cancelled.)
4. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~first layer substrate~~ comprises Ga_2O_3 , $(\text{In}_x\text{Ga}_{1-x})_2\text{O}_3$ where $0 \leq x < 1$, $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$ where $0 \leq x < 1$, and $(\text{In}_x\text{Al}_y\text{Ga}_{1-x-y})_2\text{O}_3$ where $0 \leq x < 1$, $0 \leq y < 1$, and $0 \leq x + y < 1$ as a main constituent.
5. (Cancelled.)
6. (Currently Amended) A semiconductor layer, comprising:
a ~~first layer comprising~~ substrate of a Ga_2O_3 system single crystal ~~substrate~~;
a ~~second~~ layer comprising a nitride surface of said ~~first layer~~ substrate containing oxygen and nitrogen; and
a ~~third layer comprising~~ a GaN system epitaxial layer grown on the ~~second~~ layer comprising the nitride surface.
- 7-8. (Cancelled.)
9. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~[[first]]~~ layer consists of a single crystal $\beta\text{-Ga}_2\text{O}_3$.
10. (Previously Presented) A semiconductor layer according to claim 9, wherein the single crystal $\beta\text{-Ga}_2\text{O}_3$ has a prismatic shape having a square in cross section, and its axis direction matches a-axis $\langle 100 \rangle$ orientation, b-axis $\langle 010 \rangle$ orientation, or c-axis $\langle 001 \rangle$

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orientation.

11. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~[[first]]~~ layer comprises $(\text{In}_x\text{Ga}_{1-x})_2\text{O}_3$ where $0 < x < 1$.
12. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~[[first]]~~ layer comprises $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$ where $0 < x < 1$.
13. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~[[first]]~~ layer comprises $(\text{In}_x\text{Al}_y\text{Ga}_{1-x-y})_2\text{O}_3$ where $0 < x < 1$, $0 < y < 1$, and $0 < x + y < 1$.
14. (Cancelled.)
15. (Currently Amended) A semiconductor layer according to claim 6, wherein the ~~[[first]]~~ layer comprising the nitride surface consists of single crystal $\beta\text{-Ga}_2\text{O}_3$.
- 16-20. (Cancelled.)
21. (Currently Amended) A semiconductor layer, comprising:
 - a ~~first layer comprising~~ a Ga_2O_3 system single crystal substrate; and
 - a ~~second layer comprising~~ a nitride surface of said ~~first layer~~ substrate which contains oxygen and nitrogen,wherein the ~~second layer~~ comprises a GaN system compound semiconductor.